



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,424	12/03/2003	Hiroyuki Kojima	117756	4778
25944	7590	01/11/2006	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			DI GRAZIO, JEANNE A	
		ART UNIT	PAPER NUMBER	
			2871	

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/725,424	KOJIMA ET AL.
	Examiner	Art Unit
	Jeanne A. Di Grazio	2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 28 September 2005.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1 and 3-10 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1 and 3-10 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 03 December 2003 is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12/7/2005.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

**DETAILED ACTION**

*Claims*

Claims 1 and 3-10 are pending per Amendment of September 28, 2005 with claim 2 having been cancelled per said Amendment. Claims 1, 3-5 and 8 have all been amended per Amendment of September 28, 2005.

*Priority*

Priority to Japanese Patent Application No. 2002-370070 (Dec. 20, 2002) is claimed. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

*Information Disclosure Statement*

Receipt is acknowledged of Applicant's IDS of December 7, 2005.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent 5,835,139 (to Yun et al.)(Published Nov. 10, 1998).

Regarding claim 1 (as amended), Yun Figure 7 illustrates a liquid crystal display (700) comprising an LCD panel (300)(=an electro-optical device) encased in a mounting case (mounting case = 520 + 500) and having an image display region on which projection light from a light source is incident and a mounting case (mounting case = 520 + 500) including a plate (rear case 500) disposed to face one surface of the electro-optical device (300) and a cover (front case 520) covering the electro-optical device (300), a portion of the cover (300) abutting against the plate (500) (when the pieces are assembled the front case abuts the rear case along its sides),

the mounting case (520 + 500) accommodating the electro-optical device (300) by holding at least a portion of a peripheral region positioned at the circumference of the image display region of the electro-optical device (300) with at least one of the plate (500) and cover (520)(please note that upon assembly, all of the pieces are mutually held together) and at least one of the plate (500) and cover (520) being bonded to the electro-optical device (300)(screws 430 and screw holes 410c in rear case 500 bond with the screw holes 410a of the LCD panel 300).

Please note that Yun shows a liquid crystal panel (300) and as such it is noted that the panel has a display window (viewing area)(Applicant's "at least one of the plate and the cover including a surface that extends substantially parallel with the image display region of the electro-optical device, the surface being formed with a window.").

In the above embodiment, Yun does not appear to specify that the surface of the at least one of the plate and the cover being bonded to the electro-optical device by double coated adhesive tape at the periphery of the window.

In another embodiment, however, Yun teaches that the assembling or fastening devices which include a double-sided adhesive tape, are located at side surfaces of the display such that the cover and rear case can be adhered to the display (Column 5, Lines 1-20)(emphasis added).

Because the display includes a window portion (viewing area) then the double-sided adhesive tape is located at the periphery of the window (viewing area).

It would have been obvious to one of ordinary skill in the art of liquid crystals at the time the invention was made to exchange screws for a double-sided adhesive tape because the device is easier to manufacture (Yun, Column 5, Lines 2-4)(stating "This example has an added advantage in that no screws are needed which makes the manufacturing method easy.").

Thus, claim 1 is rejected.

As to claim 5 (amended), as noted, once the parts are assembled all of said parts are bonded over an entire peripheral region as opposed to just a portion of the device periphery.

Thus, claim 5 is rejected.

Claims 3 and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent 5,835,139 (to Yun et al.)(Published Nov. 10, 1998) in view of United States Patent 5,853,179 (to Yamanaka).

As to claims 3 (amended) and 10, Yun does not appear to explicitly specify that the double coated adhesive tape (or mold material) has a heat conductivity of 0.6 W/m K or more and that the device is incorporated into a projection display.

Yamanaka is drawn to a liquid crystal display for a projector (Abstract and Column 1, Lines 11-34).

In Yamanaka, a transparent silicone adhesive is used to attach plates (G1 and G2 of Figure 1 for example) and the adhesive has a heat conductivity of 1.0 W/m K or higher (Column 4, Lines 22-25).

It would have been obvious to one of ordinary skill in the art of liquid crystals at the time the invention was made to modify Yun in view of Yamanaka because in a projection display, heat dissipation is critical to the proper functioning of the device.

Yun states:

“In a liquid crystal display for use with a projector in particular, it is necessary to receive intense light from a light source in order to project an image onto a screen. Accordingly, temperature of the liquid crystal display greatly rises because of radiant heat from the light source, causing degradation of a displayed image quality.” (Column 1, Lines 17-22).

Such an adhesive having such heat conductivity transmits heat to metal frames and to the outside without the need for costly fans and other costly heat dissipating devices (Column 6, Line 18-21 and 27-34).

Thus, claims 3 and 10 are rejected.

As to claim 7, Yamanaka teaches that the metal frames has a black coating for flare prevention and light blocking (Column 10, Lines 25-30).

Thus, claim 7 is rejected.

As to claims 8 (amended) and 9, the limitations “plating” and “blast process” are product-by-process limitations. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior art was made by a different process. MPEP 2113.

Thus, claims 8 and 9 are rejected.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent 5,835,139 (to Yun et al.)(Published Nov. 10, 1998) in view of Japanese Patent Application No. 10-171368 (to Yamamoto).

As to claim 4 (amended), Yun does not appear to explicitly that the double coated adhesive tape includes acryl rubber.

However, Yamamoto teaches and discloses an image display device in which an adhesive tape comprising an acryl rubber is used to securely hold a large display panel.

It would have been obvious to one of ordinary skill in the art of liquid crystals at the time the invention was made to modify Yun in view of Yamamoto to securely hold a large display panel (Abstracts).

Thus, claim 4 is rejected.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent 5,835,139 (to Yun et al.)(Published Nov. 10, 1998) in view of United States Patent 4,762,983 (to Oogita et al.).

As to claim 6, Yun does not appear to explicitly specify that the thickness of the double coated adhesive tape is in the range of 50 to 200  $\mu\text{m}$ .

Oogita is drawn to a thin electronic apparatus in which an adhesive tape is used that has a thickness of 70 or 50  $\mu\text{m}$  depending on the nature of the adhesive tape (Column 1, Lines 58-60 and Column 2, Lines 1-9 and claim 3).

It would have been obvious to one of ordinary skill in the art of liquid crystals at the time the invention was made to modify Yun in view of Oogita for a device that is thin in size and that resists bending and twisting (Abstract).

Thus, claim 6 is rejected.

*Response to Arguments*

Applicant's arguments with respect to said claims have been considered but are moot in view of the new ground(s) of rejection.

*Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 2871

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeanne A. Di Grazio whose telephone number is (571)272-2289. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim, can be reached on (571)272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jeanne Andrea Di Grazio  
Patent Examiner  
Art Unit 2871

JDG

  
ANDREW SCHECHTER  
PRIMARY EXAMINER